GSL Invited Talks, Presentations, Panelist Assignments, Tutorials, and Posters 2016-2020

This list of over 450 items presented by GSL team members is not comprehensive, but demonstrates the extensive reach of GSL staff for sharing their research, expertise and experiences.

Dates	Presenter	Type	Title	Sponsor	City	Country
10-2015	Curtis Alexander	Invited Talk	The NOAA High-Resolution Rapid Refresh Storm-Scale Model: Operational Implementation and Ongoing Research	The Pennsylvania State University Department of Meteorology	State College, PA	USA
10-2015	Zoltan Toth	Invited Talk	Numerical Weather Prediction based nowcasting for the Pyeongchang 2018 RDP/FDP	ICE-POP 2018 Winter Olympics (International Collaborative Experiments for Pyeongchang 2018 Olympic and Paralympic winter games) RDP/FDP Workshop	Seoul	South Korea
10-2015	Georg Grell	Invited Talk	New Developments of a Scale and Aerosol Aware Convective Parameterization	China Meteorological Administration	Shanghai	China
12-2015	Jason English	Invited Talk	What do we need to know to model the microphysical evolution of	AGU 2015	San Francisco, CA	USA
12-2015	Mark Govett	Invited Talk	Massively Parallel Fine Grain Computing	Japanese National Institute of Informatics (NII),	Shonan Village	Japan
12-2015	Georg Grell	Invited Talk	New Developments and Applications of a Scale and Aerosol Aware Convective Parameterization	China Meteorological Administration	Guangzhou	China
12-2015	Georg Grell	Invited Talk	Aerosol and Their Impacts on Numerical Weather Prediction", "Best Practices When Applying WRF-Chem	Hong Kong University of Science and Technology (HKUST)	Nansha	China
12-2015	Georg Grell	Invited Talk	Introduction to WRF-Chem	Hong Kong University of Science and Technology (HKUST)	Nansha	China
01-2016	Georg Grell	Invited Talk	Aerosol Awareness in a Convective Parameterization for Deep and Shallow Convection: Comparison to Cloud Resolving Simulations	American Meteorological Society 2016 annual conference	New Orleans, LA	USA
01-2016	Betsy Weatherhead	Invited Talk	Climate Observing System Simulation Experiments	AMS Annual Conference	New Orleans, LA	USA
01-2016	Betsy Weatherhead	Invited Talk	Designing the Climate Observing System of the Future	US Decadal Survey	Washington, D.C.	USA
01-2016	Ligia Bernardet	Invited Talk	Global Model Test Bed: Fostering Community Involvement in NOAA's NGGPS	Sixth Conference on Transition of Research to Operations	New Orleans, LA	USA
02-2016	Ligia Bernardet	Invited Talk	Facilitating Community Modeling for Use in NOAA Operations - A DTC Perspective	NOAA Next-Generation Global Prediction System Sea Ice Modeling Workshop	Boulder, CO	USA
02-2016	Ligia Bernardet	Invited Talk	Global Model Test Bed (GMTB)	HIWPP/NGGPS Program Status Meeting	College Park, MD	USA
02-2016	John Brown	Invited Talk	The NOAA High-Resolution Rapid Refresh Storm-Scale Model Systems	Injie Systems, Inc. (Company that maintains wind	San Diego, CA	USA
02-2016	Betsy Weatherhead	Invited Talk	Planning US Climate Observations Across Agencies	US Global Change Research Program	Washington, D.C.	USA
02-2016	Eric P. James	Invited Talk	Cloud Ceiling forecasts for Aviation from the 3-km High Resolution Rapid Refresh	NWS Aviation Weather Center Winter Weather Experiment	Kansas City, MO	USA
03-2016	Betsy Weatherhead	Invited Talk	Considerations of Future Observations to Support Weather and Climate	World Meteorological Organization	Amsterdam	The Netherland
03-2016	Missy Petty Lidia Cucurull	Invited Talk	Colorado Aerospace Day	Colorado State Capitol	Denver, CO	USA
03-2016	Betsy Weatherhead	Invited Talk	Identifying Small Improvements in Weather Forecast Models	European Centre for Medium Range Weather Forecasting	Reading	UK
04-2016	Benjamin W. Green	Invited Talk	Simulating Tropical Cyclones: Impacts of Air-Sea Flux Prameterizations, and Some Thoughts on Large-Eddy Simulations	University of Wyoming	Laramie, WY	USA
05-2016	Georg Grell	Invited Talk	NWP prediction at ESRL/GSD: Latest developments in physics and integrated modeling	The 4th International Workshop on Next-generation NWP models	Jeju	South Korea
05-2016	Lidia Cucurull	Invited Talk	Global OSSEs to Assess New Sensors Potential Impacts on NOAA Systems	World Meteorological Organization Workshop on the Impact of Various Observing Systems on NWP	Shanghai	China
05-2016	Zoltan Toth	Invited Talk	Short course to PhD students on Predictability	Eotvos Lorand University,	Budapest	Hungary
05-2016	Betsy Weatherhead	Invited Talk	Planning Observations for Weather and Climate	World Meteorological Organization, Road to the Future	Shanghai	China
05-2016	Zoltan Toth	Invited Talk	Probabilstic forecasting	Karlsruhe Institute of Technology	Karlsruhe	Germany
05-2016	Zoltan Toth	Invited Talk	Statistical processing of NWP forecasts	Heidelberg Institute of Theoretical Studies	Heidelberg	Germany

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05-2016	Tatiana Smirnova	Invited Talk	RUC LSM - Land Surface component in operational Rapid Refresh (RAP) and High-Resolution Rapid Refresh (HRRR)	RUC/Noah Land Surface Model Training	Boulder, CO	USA
06-2016	Tatiana Smirnova	Invited Talk	Update on RUC LSM – land-surface component in operational RAP and HRRR	WRF Users' Workshop, LSM Working group	Boulder, CO	USA
07-2016	Lidia Cucurull	Invited Talk	Optimizing and Prioritizing Current and Future Global Observing Capabilities, NOAA Science Days	NOAA Science Center	Silver Spring, MD	USA
07-2016	Ravan Ahmadov	Invited Talk	WRF-Chem: Online vs Offline Atmospheric Chemistry Modeling	National Center for Atmospheric Research	Boulder, CO	USA
08-2016	Trevor Alcott	Invited Talk	Science and Operations Officer training	NWS	Norman, OK	USA
08-2016	Hiliary Peddicord	Invited Talk	NOAA SOS Explorer - Earth Science Data Visualizations in the Classroom	Roadmap to STEM Conference	Rock Springs, WY	USA
08-2016	Timothy Brown	Invited Talk	Introduction to OpenMP	Rocky Mountain Advanced Computing Consortium	Ft. Collins, CO	USA
08-2016	Timothy Brown	Invited Talk	Introduction to MPI	Rocky Mountain Advanced Computing Consortium	Ft. Collins, CO	USA
08-2016	Hiliary Peddicord	Invited Talk	SOS: Bringing Geoscience and Climate Literacy to the World on Multiple Platforms	CIRES Science Review	Boulder, CO	USA
09-2016	Stan Benjamin	Invited Talk	Progress Toward Improved Wind/Solar Forecasts in NOAA Hourly Updated HRRR/RAP Models	UVIG Workshop on Forecasting Variable Generation	Denver, CO	USA
11-2016	Tony Liao	Invited Talk	Science On a Sphere - Technical Innovation	China Meteorological Administration - Huafeng Weather Media Group	Beijing	China
11-2016	Zoltan Toth	Invited Talk	Numerical Weather Prediction based nowcasting	ICE-POP 2018 Winter Olympics (International Collaborative Experiments for Pyeongchang 2018	Seoul	South Korea
11-2016	Ligia Bernardet	Invited Talk	Global Model Test Bed: Fostering Community Involvement in NOAA's NGGPS	George Mason University - Center for Ocean, Land and Atmospheric Prediction	Fairfax, VA	USA
11-2016	Theresa Ladwig	Invited Talk	Data Assimilation Tutorial	AMS 28th Conference on Severe Local Storms	Portland, OR	USA
11-2016	Ligia Bernardet	Invited Talk	Long-Term Stategy for NGGPS Physics Management (A Proposal for Discussion)	NGGPS Atmospheric Physics Workshop	College Park, MD	USA
11-2016	Timothy Brown	Invited Talk	Introduction to OpenMP	Super Computing 2016	Salt Lake City, UT	USA
11-2016	Timothy Brown	Invited Talk	Introduction to MPI	Super Computing 2017	Salt Lake City, UT	USA
11-2016	Ligia Bernardet	Invited Talk	Facilitating Community Modeling for Use in NOAA Operations - A DTC Perspective	NOAA OAR Global Modeling Meeting	Boulder, CO	USA
12-2016	Betsy Weatherhead	Invited Talk	Detecting Trends in Environmental Data	Institute for Advanced Sustainable Studies	Bremen	Germany
12-2016	Betsy Weatherhead	Invited Talk	Designing Systems to Detect Trends	Institute for Advanced Sustainable Studies	Potsdam	Germany
01-2017	Curtis Alexander	Invited Talk	Observation Impacts in Mesoscale Numerical Weather Prediction	AMS	Seattle, WA	USA
01-2017	Dave Turner	Invited Talk	Ground-based Remotely Sensed Water Vapor and Temperature Profiles in the Lower Troposphere: Progress and Prospects	AMS	Seattle, WA	USA
01-2017	Cecelia DeLuca	Invited Talk	How the Earth System Prediction Suite Contributes to a Coordinated S2S Research and Prediction Capability	AMS Annual Meeting - 2017	Seattle, WA	USA
02-2017	Georg Grell	Invited Talk	Parameterizing and Simulating Physics Processes in Present and Future NWP - Breaking Down Walls	INTROSPECT 2017, International Workshop on Representation of Physical Processes in Weather and	Pune	India
02-2017	Georg Grell	Invited Talk	NWP prediction at ESRL/GSD: Latest developments and applications for physics parameterizations	INTROSPECT 2017, International Workshop on Representation of Physical Processes in Weather and	Pune	India
03-2017	Trevor Alcott	Invited Talk	Science and Operations Officer training	NWS	Kansas City, KS	USA
04-2017	Tony Liao	Invited Talk	An introduction to SOS (SOS)	Baotou International Convention and Exhibition Center	Baotou	China
04-2017	Curtis Alexander	Invited Talk	Development of the High-Resolution Rapid Refresh (HRRR) and	Paul Sirvatka Professor of Meteorology College of	Chicago, IL	USA
05-2017	Rainer Bleck	Invited Talk	Using ALE models for climate research -	NOAA-NCEP	Silver Spring, MD	USA
05-2017	Ravan Ahmadov	Invited Talk	Institute for Advanced Sustainability Studies	WRF-Chem Workshop	Pottsdam,	Germany
05-2017	Zoltan Toth	Invited Talk	Shadowing with observations: An equilibrium between observational gain	Laboratoire de Météorologie Dynamique · Ecole Normale	Paris	France
05-2017	Zoltan Toth	Invited Talk	Statistical post-processing: Problems, objectives, methods	MeteoFrance Post-Processing Workshop	Paris	France

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05-2017	Dave Turner	Invited Talk	Variational retrieval of boundary layer thermodynamic profiles from ground-based observations	International Symposium on Tropospheric Profiling	Ft. Collins, CO	USA
05-2017	Stan Benjamin	Invited Talk	Experimental and operational RAP/HRRR forecasting of US/West Coast precipitation events	NOAA ESRL workshop on Forecast-Informed Reservoir Operations (FIRO) (along with USGS, UCSD and other	Boulder, CO	USA
06-2017	Dave Turner	Invited Talk	Using Raman lidar water vapor profile observations to characterize turbulence in the tropical convective boundary layer	International Symposium on Tropospheric Profiling	Ft. Collins, CO	USA
06-2017	Eric James	Invited Talk	Rapidly-updating numerical weather prediction for fire weather situational awareness and forecasting: The High-Resolution Rapid Refresh	United States Department of Agriculture Forest Service, Rocky Mountain Research Station, Fire Fuel and Smoke	Missoula, MT	USA
06-2017	Eric James	Invited Talk	Rapidly-updating numerical weather prediction for fire weather situational awareness and forecasting: The High-Resolution Rapid Refresh model	U.S. Forest Service Fire Sciences Laboratory (spring seminar series)	Missoula, MT	USA
06-2017	Matt Wandishin	Invited Talk	Extracting Uncertainty Information from Probabilistic Forecasts	Utility Variable-generation Integration Group	Atlanta, GA	USA
06-2017	Dave Turner	Invited Talk	The Power of Long-term Ground-based Downwelling Spectral Infrared Radiance Observations	NOAA	Boulder, CO	USA
07-2017	Therese Ladwig	Invited Talk	The Rapid Refresh (RAP) version 4, the High Resolution Rapid Refresh (HRRR) version 3, and Convection Allowing Ensemble Prediction	WPC Flash Flood and Intense Rainfall Experiment Seminar	College Park, MD	USA
07-2017	Hilary Peddicord	Invited Talk	Taking the Pulse of the Planet with SOS Explorer	Boulder Library Summer Reading/Speaker, Series: Building a Better World	Boulder, CO	USA
08-2017	Therese Ladwig	Invited Talk	The Rapid Refresh (RAP) version 4, the High Resolution Rapid Refresh (HRRR) version 3, and Convection Allowing Ensemble Prediction	AWC Summer Experiment Seminar	Kansas City, MO	USA
08-2017	Ligia Bernardet	Invited Talk	Connecting Physics parameterization or suites to FV3 through the Common Community Physics Package (CCPP)	NOAA Environmental Modeling Center, FV3 Dynamics and Physics Project	College Park, MD	USA
09-2017	Mark Govett	Invited Talk	Challenges in Modeling and Assimilation in the Exascale Era	ECMWF/ESCAPE (Energy-efficient and Scalable Algorithms for weather Prediction at Exascale)	Poznan	Poland
09-2017	Melinda Marquis	Invited Talk	WFIP2 and preliminary modeling results	European Meteorological Society Conference on Applied	Dublin	Ireland
09-2017	Zoltan Toth	Invited Talk	A could analysis and nowcasting system (CAN) for ICE-POP 2018	3rd ICE-POP 2018 Winter Olympics (International Collaborative Experiments for Pyeongchang 2018	Virtual to Seoul	South Korea
09-2017	Duane Rosenberg	Invited Talk	Application and Performance Quantification of Putative Exascale Software Technologies for High Order Computational Fluid Dynamics	2nd ESCAPE Dissemination and Training Wkshp	Poznan	Poland
09-2017	Hilary Peddicord	Invited Talk	Applying Strategic Framing around a Warming World	Colorado Science Education Network at Denver Museum of Nature and Science	Denver, CO	USA
09-2017	Eric Hackathorn Jeff Smith	Invited Talk	Visualization and Story Telling With SOSx and Virtual Reality (VR)	UCAR/NCAR Software Engineering Assembly	Boulder, CO	USA
09-2017	Ming Hu, Terra Ladwig	Invited Talk	Introduction and Data Assimilation Developments for the RapidRefresh (RAP), HighResolution Rapid Refresh (HRRR) and ConvectionAllowing	San Paulo University	San Paulo	Brazil
09-2017	Therese Ladwig	Invited Talk	Introduction and Data Assimilation Developments for the RapidRefresh	University of Sao Paulo Seminar	Sao Paulo, SP	Brazil
10-2017	Dave Turner	Invited Talk	Land-atmosphere interactions observed during the 2017 solar eclipse	Institute for Geophysics and Meteorology	Cologne	Germany
10-2017	Dave Turner	Invited Talk	Synergy of ground-based water vapor and temperature profiling in the lower troposphere	Jülich Observatory for Cloud Evolution Kick-off Symposium, Jülich Research Center	Jülich	Germany
10-2017	Michael Fiorino	Invited Talk	Recent GMTB SCM dev and comparison with the GFS SAS/GF runs for 201606-08	NCAR	Boulder, CO	USA
10-2017	Karina Apodaca	Invited Talk	Implementation of the Variational GOES-16 GLM lightning assimilation into the GSI system	XVI CPTEC/INPE Graduate Student Colloquium on Meteorology	São José dos Campos	Brazil
11-2017	Ligia Bernardet	Invited Talk	Facilitating community engagement in physics development: CCPP and IPD at the Global Model Test Bed (GMTB)	NCAR	Boulder, CO	USA
11-2017	Kevin Manross	Invited Talk	"How's the Weather? (Not Just a Conversation Starter)"	Northeast Elementary School	Parker, CO	USA
12-2017	Georg Grell	Invited Talk	From Global to Cloud Resolving Scale: Experiments with a Scale- and Aerosol-Aware Physics Package and Impact on Tracer Transport	AGU 2017	New Orleans, LA	USA
01-2018	Betsy Weatherhead	Invited Talk	Fostering Open Communication about Forecast Improvement	American Meteorological Society's 98th Annual Meeting	Austin, TX	USA
01-2018	Isidora Jankov	Invited Talk	Stochastic Approaches Within a High Resolution Rapid Refresh Ensemble	American Meteorological Society's 98th Annual Meeting	Austin, TX	USA
02-2018	Dave Turner	Invited Talk	The Land-Atmosphere Feedback Experiment (LAFE): First Results	Colorado State University Atmospheric Sciences Department Colloquium	Ft. Collins, CO	USA
02-2018	Stan Benjamin	Invited Talk	Wind Forecasting Improvements and the NOAA HRRR Forecasting Model	Utility Variable-Generation Integration Group (UVIG)	NA	USA
02-2018	Beth Russell	Invited Talk	La Veta Winds	La Veta Public Library	La Veta, CO	USA

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03-2018	John Brown	Invited Talk	The NOAA High-Resolution Rapid Refresh Storm-Scale Model Systems	Injie Systems, Inc.	San Diego, CA	USA
03-2018	Dave Turner	Invited Talk	AERIoe and TPSS	Space Science and Engineering Center (SSEC)	Madison, WI	USA
03-2018	Dave Turner	Invited Talk	The Land-Atmosphere Feedback Experiment (LAFE): First Results	Space Science and Engineering Center (SSEC)	Madison, WI	USA
03-2018	Shan Sun	Invited Talk	Subseasonal Forecasting with an Icosahedral, Vertically Quasi-Lagrangian Coupled Model: Systematic Errors and Deterministic/Probabilistic Forecast Skill	NCEP	College Park, MD	USA
04-2018	Jebb Stewart	Invited Talk	Exploration of New Visualization Techniques for Scientific Communities, Education, and Outreach	NOAA Environmental Data Management (EDM) Workshop	Silver Spring, MD	USA
04-2018	Terra Ladwig	Invited Talk	Operational implementation of the most recent versions of Rapid Refresh (RAP) and High-Resolution Rapid Refresh (HRRR) and Hazardous Weather Testbed Spring Experiment activities for the HRRR-Ensemble.	NOAA/OAR Senior Managment Meeting Spotlight Presentation	Remote, Boulder/Silver Springs	USA
04-2018	Zoltan Toth	Invited Talk	Short course to PhD students on Predictability	Eotvos Lorand University,	Budapest	Hungary
04-2018	Zoltan Toth	Invited Talk	Ensemble forecasting: A generation of information, or a filter of noise?	Hungarian Meteorological Servie	Budapest	Hungary
04-2018	Mark Govett	Invited Talk	Future HPC Needs for Earth System Prediction Models	Inter-Agency Brief to FCMSSR (N. Jacops, chair)	Washington, D.C.	USA
05-2018	Eric James	Invited Talk	AMDAR Data Assimilation within Regional NWP Systems at NOAA/NCEP	WMO Stakeholder Workshop for Scoping and Development of New Forecast Products Using AMDAR Data	Naivasha	Kenya
06-2018	Curtis Alexander	Invited Talk	A Decade in Community-Supported Development of the Frequently Updated RAP and HRRR Model Forecast Systems: From Research to Operations and Back Again	AMS Conference on Numerical Weather Prediction/Weather Analysis and Forecasting	Denver, CO	USA
06-2018	David Dowell	Invited Talk	Regional NWP Development at NOAA's Earth System Research Laboratory	AMS WAF/NWP Conference	Denver, CO	USA
07-2018	Mark Govett	Invited Talk	NOAA Model Development Targeting Exascale	Platform for Advanced Scientific Computing	Basel	Switzerland
07-2018	Dave Turner	Invited Talk	Evaluating land-atmosphere interactions during LAFE	Pacific Northwest National Laboratory	Richland, WA	USA
07-2018	Stan Benjamin	Invited Talk	Assimilation of conventional and radar obs for mesoscale models	JCSDA Annual Summer Colloquium 2018	Bozeman, MT	USA
07-2018	Ligia Bernardet	Invited Talk	Example of GMTB Test Plan: Grell-Freitas convective scheme in GFS	DTC Community Unified Forecast System Test Plan and Metrics Workshop	College Park, MD	USA
08-2018	Daniel Nietfeld	Invited Talk	Summary of EDS' AWIPS-related Work	National Weather Association Annual Meeting	St. Louis, MO	USA
08-2018	Daniel Nietfeld	Invited Talk	Hazard Services Progress Summary	National Weather Association Annual Meeting	St. Louis, MO	USA
08-2018	Daniel Nietfeld	Invited Talk	Hazard Services Recommenders	National Weather Association Annual Meeting	St. Louis, MO	USA
08-2018	Daniel Nietfeld	Invited Talk	Weather Archive and Visualization Environment (WAVE)	National Weather Association Annual Meeting	St. Louis, MO	USA
08-2018	Ligia Bernardet	Invited Talk	Common Community Physics Package	Coordination Meeting for the Unified Forecast System (UFS) Strategic Implementation Plan (SIP) Annual Update	College Park, MD	USA
08-2018	Hilary Peddicord	Invited Talk	San Lazaro SOS Career Focus	EcoArts Connections	Boulder, CO	USA
08-2018	Hilary Peddicord	Invited Talk	NOAA Education Resource	STAR Teaching Fellows	Boulder, CO	USA
08-2018	Jebb Stewart	Invited Talk	Cloud Computing Research at GSD	Testbed & Proving Grounds Committee	Virtual	
09-2018	Zoltan Toth	Invited Talk	Statitical post-processing: Why, how, and what?	9th North American Ensemble Forecast System (NAEFS) Workshop, Fleet Numerical Meteorology and Oceanography Center	Monterey, CA	USA
09-2018	Zoltan Toth	Invited Talk	Three topics in Numerical Weather Prediction	MeteoSwiss	Locarno	Switzerland
09-2018	Zoltan Toth	Invited Talk	Unbiased estimates of analysis and forecast error variance	Naval Research Laboratory	Monterey, CA	USA
09-2018	Jebb Stewart	Invited Talk	New Technology and Research at GSD	CIRA	Ft. Collins, CO	USA
09-2018	Eric James	Invited Talk	Aircraft Data Assimilation Impacts	NCAR Icing Meeting with COMAC Representatives from Shanghai	Boulder, CO	USA
09-2018	Jebb Stewart	Invited Talk	Improving Satellite Data Utilization Through Deep Learning	NESDIS AI Working Group Meeting	Virtual	
09-2018	Bryan Flint	Invited Talk	OMNI/O: A Tool for I/O Recording, Analysis, and Replay	European Centre for Medium-range Weather Forecasts (ECMWF) High Performance Computing (HPC)	Reading	UK
10-2018	Georg Grell	Invited Talk	New developments and applications of the scale-and aerosol-aware GrellFreitas convective parameterization in FV3 and WRF	WRF-GRAPES Modeling Workshop	Boulder, CO	USA

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10-2018	Ligia Bernardet	Invited Talk	Community infrastructure for facilitating and accelerating improvement and testing of physical parameterizations	WRF-GRAPES Modeling Workshop	Boulder, CO	USA
10-2018	Kevin Manross	Invited Talk	Weather Talk to Rock Ridge Elementary	Rock Ridge Elementary School	Castle Rock, CO	USA
10-2018	Curtis Alexander	Invited Talk	Progress in High-Resolution Rapid Refresh (HRRR) Deterministic and Ensemble Development for Convective Hazard Forecasts	AMS Severe Storms Conference Meeting	Stowe, VT	USA
11-2018	Dave Turner	Invited Talk	Thermodynamic Profiling and Turbulent Motions in the Boundary Layer	University of Leipzig, University of Cologne, Institute for Tropospheric Profiling	Leipzig	Germany
11-2018	Zoltan Toth	Invited Talk	ICE-POP 2018 in the world of Numerical Weather Predition	Korea Meteorological Administration	Jeju Island	South Korea
11-2018	Trevor Alcott	Invited Talk	High-Resolution Ensemble Development at NOAA/ESRL: Progress and Current Challenges	12th Northern Plains Weather Workshop	St. Cloud, MN	USA
12-2018	Ligia Bernardet	Invited Talk	On Standardization of Physical Constants for Interoperability	Earth System Prediction Capability via Teleconference	Boulder, CO	USA
01-2019	Georg Grell	Invited Talk	Scale-aware convective parameterizations	2nd WCRP Summer School on Climate Model Development	Cachoeira Paulista	Brazil
01-2019	Michael Fiorino	Invited Talk	It's the Physics (Dummy)—RA2 Contributions to Hurricane Modeling and Tropical Cyclone NWP (Invited Presentation)	AMS 99th Annual Meeting	Phoenix, AZ	USA
03-2019	Dave Turner	Invited Talk	The challenges of modeling 100-m winds off the eastern shore of the US in numerical weather prediction models	DOE's Energy Efficiency and Renewable Energy (EERE) Office on off-shore wind energy characterization	Silver Spring, MD	USA
03-2019	Dave Turner	Invited Talk	Key unresolved physics issues affecting offshore NWP modeling efforts	DOE Office of Energy Efficiency and Renewable Energy (EERE)	Alexandria, VA	USA
03-2019	Trevor Alcott	Invited Talk	Science and Operations Officer training	National Weather Service	Kansas City, KS	USA
03-2019	Trevor Alcott and Eric James	Invited Talk	Extreme Precipitation from a Modeling Perspective	West Conference of the Association of State Dam Safety Officials	Westminister, CO	USA
03-2019	Hilary Peddicord	Invited Talk	Science on Tap – NOAA Data Visualization	Gun Barrel Brewing Company	Boulder, CO	USA
03-2019	Mark Govett	Invited Talk	Advancing U.S. Weather Prediction Capabilities with Exascale HPC	GPU Technology Conference	San Jose, CA	USA
03-2019	Stan Benjamin	Invited Talk	Numerical weather prediction of severe storms at NOAA – the history of the 3km High-Resolution Rapid Refresh (HRRR) model into 2019	Central Michigan University College of Science and Engineering	Mount Pleasant, MI	USA
03-2019	Stan Benjamin	Invited Talk	Seminar Series: "Reducing systematic cloud/radiation errors from Hour 4 to Week 4."	University of Michigan Climate and Space Sciences and Engineering (CLaSP)	Ann Arbor, MI	USA
04-2019	Eric Hackathorn, Jeff Smith	Invited Talk	Emerging and Disruptive Technologies	University of Colorado Leeds School of Business	Boulder, CO	USA
04-2019	Tracy Hansen	Invited Talk	Societal Drivers (interworven with Technical Drivers) of Workforce Development	AMS Workshop "New Minds for New Science"	Washington, D.C.	USA
04-2019	Dave Turner	Invited Talk	The Second Wind Forecast Improvement WFIP-2 project	DOE Energy Efficiency Renewable Energy WETO Peer-Review meeting	Washington, D. C.	USA
05-2019	Christina Kumler	Invited Talk	Tropical and Extratropical Cyclone Detection Using Deep Learning	CIRA at CSU	Ft. Collins, CO	USA
05-2019	Christina Kumler	Invited Talk	GSD's Machine Learning Initiatives	CIRA Fellows Update	Ft. Collins, CO	USA
05-2019	Mark Govett	Invited Talk	NCEP Seminar: Advancing U.S. Operational Weather Prediction Capabilities in the Next Decade	NCEP		
05-2019	Mark Govett	Invited Talk	Integrating AI into Existing Mission-Critical Systems	The Next AI Platform	San Jose, CA	USA
05-2019	Ligia Bernardet	Invited Talk	Common Community Physics Package (CCPP)	FY20-22 UFS Strategic Implementation Plan (SIP) Meeting	College Park, MD	USA
05-2019	Jebb Stewart	Invited Talk	New Approaches to Dealing with Increasing Volumes of Data for Numerical Weather Modeling	University of Denver to the School of Engineering and Computer Science	Denver, CO	USA
05-2019	Evan Kalina	Invited Talk	Fostering Community Innovation in the Hurricane Weather Research and Forecast system	Cooperative Institute for Research in the Atmosphere (CIRA)	Ft. Collins, CO	USA
06-2019	Georg Grell	Invited Talk	NWP Prediction at ESRL/GSD: Parameterization Development for Global- and Storm-Scale Modeling	GMAO, NASA-Goddard	Greenbelt, MD	USA
06-2019	Keith Searight	Invited Talk	NOAA ESRL Global Systems Division - IT Enterprise Team	CIRA Software Engineering Group	Ft. Collins, CO	USA
06-2019	Eric James	Invited Talk	A rapidly-updating high-resolution smoke prediction system for the United States: The HRRR-smoke model	Breckenridge Summer Solstice Conference	Breckenridge, CO	USA

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06-2019	Eric James	Invited Talk	A rapidly-updating high-resolution smoke prediction system for the United States: The HRRR-smoke model	National Weather Service and Idaho Department of Air Quality (DEQ) Air Quality Partner Meeting	Coeur d'Alene, ID presented remotely	USA
07-2019	Curtis Alexander	Invited Talk	Introduction to Numerical Weather Prediction, NOAA/NASA Satellite Meteorology Summer Workshop	Colorado State University	Fort Collins, CO	USA
07-2019	Dave Turner	Invited Talk	Ground-Based Remote Sensors for Wind, Temperature, and Humidity Profiling in the Boundary Layer	FAA Technical Exchange Meeting	Boulder, CO	USA
07-2019	Christina Kumler	Invited Talk	Machine Learning Specific to Climate and Weather Applications	NOAA-STAR Center for Satellite Applications and Research seminar	Virtual	USA
07-2019	David Dowell	Invited Talk	Real-time, storm-scale analysis and prediction: High-Resolution Rapid Refresh and Warn-on-Forecast	NCAR ASP Colloquium	Boulder, CO	USA
08-2019	Dave Turner	Invited Talk	NOAA's Bedrock-to-Boundary Layer Effort	GEWEX Global Land-Atmosphere System Study (GLASS) meeting	Boulder, CO	USA
08-2019	Zoltan Toth	Invited Talk	On the predictability of the atmosphere as revealed by tropical cyclones	University of Maryland	College Park, MD	USA
08-2019	Jebb Stewart	Invited Talk	Artificial Intelligence Applications Towards Efficient Data Processing	NOAA Atlantic Oceanographic and Meteorological Laboratory (AOML)	Remote	USA
08-2019	Zoltan Toth	Invited Talk	Deconstructing ensembles	NASA Goddard Space Flight Center	Breenbelt, MD	USA
09-2019	Dave Turner	Invited Talk	The Land-Atmosphere Feedback Experiment (LAFE)	Germany Air and Space Research Center (DLR)	Oberpfaffenhofen	Germany
09-2019	Jebb Stewart	Invited Talk	New Approaches to Dealing with Increasing Volumes of Data for Numerical Weather Modeling	Earth Science Information Partners (ESIP)	Remote	USA
10-2019	Isidora Jankov	Invited Talk	Stochastically Perturbed Parameterizations in HRRRE	EUMETNET	Madrid	Spain
10-2019	John Brown	Invited Talk	Orographic Precipitation	China Meteorological Administration, China, mainland	Boulder, CO	USA
10-2019	Dave Turner	Invited Talk	Ground-based Thermodynamic and Kinematic Profiles in the Boundary Layer	OAR Forum on Engineering and the Arctic	Seattle, WA	USA
10-2019	Jebb Stewart	Invited Talk	Emerging and New Technology Research at the Earth System Research Laboratory	Aviation Weather Center (AWC)	Remote	USA
11-2019	Dave Turner	Invited Talk	Evaluating land-atmosphere interactions during LAFE (Land-Atmosphere Feedback Experiment)	Atmospheric Sciences Department at the University of Albany	Albany, NY	USA
11-2019	Kevin Manross	Invited Talk	How's the Weather (Not Just a Conversation Starter)	Rock Ridge Elementary School-Mr. Rasavage's 5th grade class	Castle Rock, CO	USA
11-2019	Kevin Manross	Invited Talk	Clouds	Rock Ridge Elementary School-Ms. Breithart's 2nd grade class	Castle Rock, CO	USA
11-2019	Zoltan Toth	Invited Talk	Forecast vs. simulation: What's the difference?	5th ICE-POP 2018 Workshop, Korea Meteorological Administration,	Gyengju	Korea
11-2019	Dave Turner	Invited Talk	Temperature and Humidity Profiling from Ground-based Microwave Radiometers: How Good Are These Observations? Where is the Information?	New York State Mesonet Group	Albany, NY	USA
11-2019	Dave Turner	Invited Talk	The NOAA Atmospheric Science for Renewable Energy (ASRE) research program	Environmental and Climate Sciences Department, Brookhaven National Laboratory	Upton, NY	USA
11-2019	Evan Kalina	Invited Talk	The Hurricane Weather Research and Forecast System (HWRF) No Vortex Initialization (HNVI) Realtime Experiment	Hurricane Forecast Improvement Program (HFIP) 2019 Annual Meeting	Miami, FL	USA
11-2019	Dave Turner	Invited Talk	Evaluating land-atmosphere interactions during LAFE (Land-Atmosphere Feedback Experiment)	Environmental and Climate Sciences Department, Brookhaven National Laboratory	Upton, NY	USA
11-2019	Dave Turner	Invited Talk	Evaluating land-atmosphere interactions during LAFE	Atmospheric and Oceanic Sciences Department, McGill University	Montreal	Canada
11-2019	Dave Turner	Invited Talk	Version 4 of the High-Resolution Rapid Refresh (HRRR)	Meteorological Services Canada	Montreal	Canada
11-2019	Ligia Bernardet	Invited Talk	Kick off meeting For Projects Funded by OSTI-Modeling and OWAQ	UFS Physics	College Park, MD	USA
11-2019	Zoltan Toth	Invited Talk	Fly in the ointment: Errors in Numerical Weather Prediction	Institute of Atmospheric Physics, Chinese Academy of Sciences	Beijing	China
11-2019	Zoltan Toth	Invited Talk	Weather perceptualized: A new look at visibility	Commercial and General Aviation Global Operation Weather Service Forum, Chinese Meteorological Administration	Beijing	China
11-2019	Dave Turner	Invited Talk	Numerical Weather Prediction Modeling	Boulder Flatirons Rotary Club	Boulder, CO	USA

GSL Invited Talks, Presentations, Panelist Assignments, Tutorials, and Posters 2016-2020

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Dates	Presenter	Type	Title	Sponsor	City	Country
12-2019	Christina Kumler	Invited Talk	Using Machine Learning to Find Weather Making Cyclones (NOAA Booth) x2	AGU 2019	San Francisco, CA	USA
12-2019	Dave Turner	Invited Talk	NOAA's Atmospheric Science for Renewable Energy Program	AGU 2019	San Francisco, CA	USA
12-2019	Hilary Peddicord	Invited Talk	Keeping up with the Data Revolution with SOS Explorer	AGU 2019	San Francisco, CA	USA
12-2019	Jebb Stewart	Invited Talk	Advanced Technology for a Better Tomorrow	AGU 2019	San Francisco, CA	USA
12-2019	Theresa Ladwig	Invited Talk	High Resolution Rapid Refresh (HRRR): The Last Implementation and What's Next	AGU 2019	San Francisco, CA	USA
12-2019	Dave Turner	Invited Talk	The Land-Atmosphere Response in the High-Resolution Rapid Refresh (HRRR) Weather Forecast Model During the 2017 Solar Eclipse Layer	AGU 2019	San Francisco, CA	USA
12-2019	Dave Turner	Invited Talk	The NOAA Atmospheric Science for Renewable Energy Research Program	AGU 2019	San Francisco, CA	USA
12-2019	Ed Hartnett	Invited Talk	Software Engineering Methods for the ParallelIO Library	AGU 2019	San Francisco, CA	USA
12-2019	Jason English	Invited Talk	Forecasting California heavy rain events with NOAA's high-resolution RAP/HRRR model	AGU 2019	San Francisco, CA	USA
12-2019	Duane Rosenberg	Invited Talk	Linking dissipation, mixing, anisotropy and intermittency in rotating stratified turbulence	AGU 2019	San Francisco, CA	USA
01-2020	Amanda Back	Invited Talk	Assimilation of GLM Data Together with Ground-Based Lightning Observations for Improved Storm Spin-Up in the High Resolution Rapid Refresh	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Stan Benjamin, J. M. Brown	Invited Talk	How NWP Has Evolved to Improve Safety and Efficiency for Aviation	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
02-2020	Theresa Ladwig	Invited Talk	Skype a Scientist	Murray Avenue School-remote with middle school	Huntingdon Valley, PA	USA
03-2020	Zoltan Toth	Invited Talk	Ensembles: A critical review	Atlantic Oceanographic and Meteorological Laboratory	Miami, FL	USA
03-2020	Zoltan Toth	Invited Talk	On the prospects for improved tropical cyclone forecasts	National Hurricane Center	Miami, FL	USA
04-2020	Hilary Peddicord	Invited Talk	Virtual Share-a-Thon Video presentation of SOS Explorer for K-12 virtual classrooms	NESTA (National Earth Science Teachers Association)	Virtual	USA
04-2020	Jebb Stewart	Invited Talk	Using HPC in the Cloud For Numerical Weather Prediction	Unified Forecast Steering Committee Meeting	Virtual	USA
04-2020	Beth Russell	Invited Talk	Explore the World with NOAA's fun, New App with Hilary Peddicord and Beth Russell	NOAA Live! SeaGrant webinar series	Virtual	USA
04-2020	Hilary Peddicord/Beth Russell	Invited Talk	NOAA Live! Webinar 16: Explore the World with NOAA's Fun, New App	NOAA SeaGrants STEM	Virtual	USA
04-2020	Christopher Harrop	Invited Talk	Rocoto History, Philosophy, and Future Plans	UFS Workflows Virtual Workshop	Virtual	USA
05-2020	Dave Turner	Invited Talk	Temperature and humidity profiling: Synergistic combination of different instruments	NASA Planetary Boundary Layer Study Team Workshop	Remote conference, 150+ attendees	USA
06-2020	Christina Kumler	Invited Talk	Tropical and Extratropical Cyclone Detection Using Deep Learning	CIRA ML update at CSU	Virtual	USA
06-2020	Curtis Alexander	Invited Talk for Webinar	The Unified Forecast System Short-Range Weather Application for Convection Allowing Model Forecasts	UFS Webinar Series from NOAA program office	Remote	USA
06-2020	Shilpi Gupta	Invited Talk	Python workshop for elementary school kids	Elementary school	Virtual	USA
06-2020	Georg Grell	Invited Talk	Deep, middle, low, and dx: almost resolving convection but not quite...	NCAR/WRF workshop 2020	Boulder, CO	USA
06-2020	Ian McGinnis	Invited Talk	How the SOS Project uses GitLab to deliver Software	CIRA Software Engineering Group (CSEG)	Boulder, CO	USA
08-2020	Dave Turner	Invited Talk	The NOAA Atmospheric Science for Renewable Energy Research Program	OAR Senior Management	Virtual	USA
08-2020	Dave Turner	Invited Talk	The Land-Atmospheric Feedback Experiment: Lidars were Key!!	Ball Aerospace Lidar Innovation and Networking Group Seminar	Virtual	USA
09-2020	Tony Liao	Invited Talk	Overview of TW-US Government Meteorological and Ocean Science Collaborative Activity	National Academy of Marine Research (Taiwan)	Kaohsiung	Taiwan
09-2020	Jebb Stewart	Invited Talk	AI/ML Methods in Operational Applications	NOAA Science Council	Virtual	USA
09-2020	Jebb Stewart	Invited Talk	Using HPC in the Cloud for NWP	OAR Cloud Tiger Team Webinar	Virtual	USA
10-2020	Dave Turner	Invited Talk	The High-Resolution Rapid Refresh (HRRR) Numerical Weather Prediction Model	Precipitation and Flash Flood Prediction from Minutes to Days Conference (organized by the Univ of Bonn)	Virtual	
10-2020	Tony Liao	Invited Talk	An introduction to SOS Explorer™ (SOSx)	Soil and Water Conservation Bureau (Taiwan)	Nantou	Taiwan

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10-2020	Tony Liao	Invited Talk	Overview of TW-US Government Meteorological and Ocean Science Collaborative Activity	National Taiwan University	Taipei	Taiwan
11-2020	Curtis Alexander	Invited Talk	Satellite Data Assimilation for Numerical Weather Prediction	NCAR Aerosols, Clouds, Convection and Precipitation Study 2020 Modeling & Assimilation Virtual Workshop	Remote	USA
11-2020	Zoltan Toth	Invited Talk	Mycrophysics in weather forecasting: A predictability perspective	6th ICE-POP 2018 Workshop, Korea Meteorological Administration	Virtual to Daegu	Korea
11-2020	Tony Liao	Invited Talk	Science On a Sphere	National Taiwan Normal University	Taipei	Taiwan
11-2020	Tony Liao	Invited Talk	Overview of TW-US Government Meteorological and Ocean Science Collaborative Activity	National Museum of Marine Science and Technology (Taiwan)	Keelung	Taiwan
11-2020	Evan Kalina	Invited Talk	An Update on Hurricane Analysis and Forecast System (HAFS) Workflow Development	Hurricane Forecast Improvement Project (HFIP) Annual Review Meeting	Miami, FL (virtual)	USA
12-2020	Dave Turner	Invited Talk	The NOAA Atmospheric Science for Renewable Energy Research Program	PROBE (Probing the Atmospheric Boundary Layer at European Scale) Online Conference	Virtual	
12-2020	Dave Turner	Invited Talk	Numerical Weather Prediction Modeling	Louisville Kiwanis club	Louisville, CO	USA
12-2020	Tony Liao	Invited Talk	Science On a Sphere	National Taiwan Ocean University	Keelung	Taiwan
01-2021	Ligia Bernardet	Invited Talk	Cross-cutting Infrastructure (CCI) UFS support at DTC	AMS Annual Meeting	Virtual	USA
01-2021	Dave Turner	Invited Talk	Weather Forecasts and Renewable Energy	Louisville Kiwanis club	Louisville, CO	USA
01-2021	Kate Zhang	Invited Talk	Development of Global Aerosol Forecast Model (GEFS-Aerosols) into NOAA's Unified Forecast System (UFS)	UFS	Virtual	USA
02-2021	Terra Ladwig	Invited Talk	Improving Forecasts with Advances in Regional Models	NOAA Central Library, NOAA Science Report	Virtual, Boulder, CO	USA
03-2021	Ming Hu, Guoqing Ge	Invited Talk	Gridpoint Statistical Interpolation (GSI) traning	Kenyan Meteorological Department	On-line	Kenya
04-2021	Christina Kumler	Invited Talk	Identifying Cyclone Regions Using Deep Learning from Satellite and Weather Data	NVIDIA GTC 2021	Virtual	USA
05-2016	Woody Roberts (co-lead)	Panelist	Collaborative Tool Evaluations for Marine Services	NOAA/Environment Canada Bi-Lateral Marine Workshop	Ann Arbor, MI	USA
06-2016	Melinda Marquis	Panelist	Federal Energy regulatory Commission workshop about increasing real-time and day-ahead market efficiency through improved software	The National Energy with Weather System (NEWS) optimization model	Washington, D.C.	USA
11-2017	Joseph Olson	Panelist	Model Physics Development in the RAP/HRRR to Improve Low-Level Winds Over Complex Terrain during the Wind Forecast Improvement Project 2	NCAR's Mesoscale and Microscale Meteorology (MMM) Division	Boulder, CO	USA
01-2018	Tracy Hansen	Panelist	Women in Atmospheric Science	AMS Board on Women and Minorities	Austin, TX	USA
09-2018	Jebb Stewart	Panelist	Convergence of HPC and the Cloud	ECMWF HPC Workshop 2018	Reading	UK
01-2019	Michael Mueller	Panelist	Unexpected negative impacts on forecasts from added observations (there was no official title)	AMS 99th Annual Meeting	Phoenix, AZ	USA
02-2019	Shilpi Gupta	Panelist	HOLOSCENES / Little Boxes: Science On a Sphere	KGNU's Community Radio's How On Earth Radio Show	Boulder, CO	USA
07-2019	Stan Benjamin	Panelist	Session 3: Hyperloop and the Human Environment Panelist presentations Climate and Weather Impacts of transportation emissions	2nd Annual HARP Conference on Hyperloop Industry and Related Technologies	Golden, CO	USA
10-2019	Evan Kalina	Panelist	Careers in Atmospheric Science	National Center for Atmospheric Research (NCAR)	Boulder, CO	USA
12-2019	Jebb Stewart	Panelist	AI for Earth Sciences	AGU 2019	San Francisco, CA	USA
02-2020	Amanda Back	Panelist	NWP/Data Assimilation	NOAA STAR; JPSS/GOES-R Proving/Ground/Risk Reduction Summit	College Park, MD	USA
08-2020	Dave Turner	Panelist	2nd NOAA Artificial Intelligence Workshop: Fundamentals of AI	NOAA	Virtual	USA
08-2020	Jebb Stewart	Panelist	Fundamentals of AI, Part 1	2nd Annual NOAA AI Workshop in Slow Motion Session 2	Virtual	USA
08-2020	Jebb Stewart	Panelist	Are you Ready for the Cloud? Cloud Initiatives, Data, Capabilities, and Technologies	NOAA Environmental Data Management (EDM) Workshop 2020	Virtual	USA
08-2020	Jonathan Joyce	Panelist	Efficiently Scaling Weather Analysis in the Cloud	NOAA Environmental Data Management (EDM) Workshop 2020	Virtual	USA
08-2020	Jebb Stewart	Panelist	AI for Environmental Data Management	NOAA EDM Workshop 2021	Virtual	USA

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09-2020	Jebb Stewart	Panelist	AI/ML for Information Extraction from Data, Part 1	2nd Annual NOAA AI Workshop in Slow Motion Session 6	Virtual	USA
11-2020	Shilpi Gupta	Panelist	Space Odyssey Reopening Press Conference at Denver Museum of Nature and Science	Denver Musueum of Nature and Science	Denver, CO	USA
12-2016	Tatiana Smirnova	Poster	Advances in RUC LSM snow component to address cold biases in snow-covered regions in RAP and HRRR	2016 AGU Fall Meeting	San Francisco, CA	USA
06-2017	Tatiana Smirnova	Poster	Update on land surface component used in operational WRF-based RAP and HRRR	2017 WRF Users' Workshop	Boulder, CO	USA
01-2018	Tanya Peevey	Poster	Development of an analysis/forecast verification package as an OSSE Joint Verification Effort within OAR focused on improving the assessment and communication of the impact of observations on NWP skill	AMS 2018	Austin, TX	USA
09-2018	Greg Pratt	Poster	Systems Requirements Development Process and Possible Outcomes	Biennial Bay-Delta Science Conference	Sacramento, CA	USA
09-2018	Ligia Bernardet	Poster	Facilitating Development of Physical Parameterizations for NOAA's Unified Forecast System	NOAA Modeling Fair	College Park, MD	USA
09-2018	Dom Heinzeller	Poster	Walking the tightrope: a shared infrastructure for model physics application on modern high performance computing systems	NCAR / 2018 MultiCore 8 Workshop	Boulder, CO	USA
05-2019	Tatiana Smirnova	Poster	Integrating Stochastic Snow Model into RUC Land Surface Model to represent sub-grid scale variability of snow cover.	CIRES Rendezvous 2019	Boulder, CO	USA
06-2019	Ligia Bernardet	Poster	The Common Community Physics Package CCPP: unifying physics across NOAA and NCAR models using a common software framework	Joint WRF and MPAS Users Workshop 2019	Boulder, CO	USA
09-2019	Thomas LeFebvre	Poster	Digital Aviation Services in the NWS	National Weather Association Annual Meeting	Huntsville, AL	USA
09-2019	Thomas LeFebvre	Poster	The Potential for Hazard Services: Science, Communication, and Collaboration for the NWS	National Weather Association Annual Meeting	Huntsville, AL	USA
12-2019	Christina Kumler	Poster	The Success and Struggles of Using Deep Learning to Detect Extratropical and Tropical Cyclone Regions of Interest (ROI) in Seconds from Satellite Data	AGU 2019	San Francisco, CA	USA
12-2019	Jacques Middlecoff	Poster	Comparing Numerical performance of Icosahedral A-grid and C-grid Schemes for the Shallow-Water Model	AGU 2019	San Francisco, CA	USA
12-2019	Yonggang Yu	Poster	Comparing Numerical Accuracy of Icosahedral A-grid and C-grid Schemes for the Shallow-Water Model	AGU 2019	San Francisco, CA	USA
12-2019	Ming Hu	Poster	Evaluate the Impact of Assimilating Dual-Polarized Quality Controlled Radial Velocity on Storm Forecast with an Operational Functional Similar HRRR System	AGU 2019	San Francisco, CA	USA
12-2019	Duane Rosenberg	Poster	Introducing GeoFLOW: Single point statistics in decaying multidimensional Burgers turbulence	AGU 2019	San Francisco, CA	USA
12-2019	Duane Rosenberg	Poster	Bi-directional cascades, large-scale intermittency and lessened dissipation: An evolved understanding of turbulent flows in the presence of waves	AGU 2019	San Francisco, CA	USA
12-2019	Christina Kumler	Poster	Detecting Extratropical and Tropical Cyclone Regions of Interest (ROI) in Satellite Data using Deep Learning	AGU 2019	San Francisco, CA	USA
01-2020	Dave Turner	Poster	Poster # S97: Using a Neural Network as an Improved Method of Predicting Wind Gusts in the HRRR	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Dave Turner	Poster	Poster # 81: Evaluating the Relative Contributions of Land Surface Fluxes toward Convective Boundary Layer Development at the ARM SGP Site: A Comparison of Observations and HRRR Output	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Dave Turner	Poster	Poster # 183: Evaluation of the High Resolution Rapid Refresh (HRRR) Model Using Near-Surface Meteorological and Flux Observations	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Greg Pratt, Leon Benjamin	Poster	Poster # 35A Operational Meteorological Assimilation Data Ingest System (MADIS) Current Functionality and Planned Enhancement	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA

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01-2020	Guoqing Ge, M. Hu, S. Benjamin, S. Weygandt, C. Alexander	Poster	Poster # 432 Improved Surface Analysis for 3D-RTMA	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Amanda Back, R. Ahmadov, M. Pagowski, E. P. James, G. Grell, C. R. Alexander, S. S. Weygandt	Poster	Poster # 815 Assimilation of VIIRS Aerosol Optical Depth Information in the RAP and HRRR System to Improve Smoke, Visibility, and Weather Forecasts	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Benjamin W. Green, S. Sun, G. A. Grell, S. G. Benjamin	Poster	Poster # 692 Subseasonal Bias and Skill in FV3 Simulations Using Two Different Physics Suites	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Darrel M. Kingfield, C. V. Dreisbach, K. Goertz, C. Golden, S. Gui, Y. Guo, T. L. Hansen,N. Hardin, T. J. LeFebvre, J. L. Mahoney, K. L. Manross, S. Murphy, D. Nietfeld, J. E. Ramer, R. Weingruber, S. Williams, S. Zhuo	Poster	Poster # 988 Hazard Services: An Information-Centric Modernization to the National Weather Service Watch/Warning/Advisory Program and Beyond	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Dave Turner	Poster	Poster # 939: Doppler Wind Lidar in the Inflow of Supercells: Synthesis of Observations from Mini-MPEX and TORUS 2019	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Georg A. Grell, H. C. Barnes, S. Sun, L. Bernardet, R. Montuoro, H. Li, B. W. Green, T. G. Smirnova, L. Zhang, J. Olson, R. Ahmadov, R. Bleck	Poster	Poster # 656: NWP Prediction at ESRL/GSD: Overview of Global Modeling Development Activities	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Greg Pratt	Poster	Poster # 592: AQPI: Improved Operational Response to Precipitation Events in the San Francisco Bay Area	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Haidao. Lin, S. Weygandt, M. Hu, H. Wang, J. M. Brown, A. Back, C. Alexander, S. G. Benjamin	Poster	Poster # 818 Assimilation of GOES ABI, CrIS-FSR, and Other New Radiance Data in RAP Version 5	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Linlin Pan, Ligia Bernardet, Dom Heinzeller, Evan Kalina, G. Grell.	Poster	Poster # 647: One-Stop Shopping for Physics across Scales: From a Single-Column Model to Three-Dimensional Configurations for Weather and S2S	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA

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01-2020	Michael D. Toy, J. B. Olson, T. G. Smirnova, J. S. Kenyon, J. M. Brown, G. A. Grell	Poster	Poster # 659 Evaluating and Tuning Orographic Gravity Wave Drag Parameterizations in Atmospheric NWP Models	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Raffaele Montuoro, Cecelia DeLuca, Rocky Dunlap, Gerhard Theurich	Poster	Poster # 644: Title: Toward Consistent Physical Constant Sets for Interoperable Earth System Models	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Yonggang G. Yu, Ning Wang, Yuanfu Xie, Mark Govett	Poster	Poster # 657: Full Velocity Field Reconstruction on Icosahedral Grids for Shallow-Water Models	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Guoqing Ge, M. Hu, Chunhua Zhou	Poster	Poster # 1247: The Python-Based MPMC Test Suite for NOAA Operational Data Assimilation Systems (GSI/EnKF)	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	James S. Kenyon, J. B. Olson, D. D. Turner	Poster	Poster # 1460: Doppler Wind Lidar Observations of Shallow Cumulus Clouds	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	J. Olson, Jaymes Kenyon, John Brown, Hannah Vagasky, Georg Grell	Poster	Poster # 1222 Developing the RAP/HRRR Physics Suite to Improve Tropical Shallow-Cumuli Structures across the Gray Zone	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Nathan Hardin, D. Nietfeld, D. M. Kingfield,	Poster	Poster # 1336 Generating In-Flight Hazard Information Using AWIPS Hazard Services	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
09-2020	Christina Kumler	Poster	Using Deep Learning to Extract Cyclone Regions of Interest (ROI)	ECMWF	Virtual	UK
01-2021	Dom Heinzeller	Poster	Exploring Physics Parameterization Development Using an Operationally Based Single-Column Model	AMS 2019	Phoenix, AZ	USA
01-2016	Leon Benjamin	Presentation	MADIS the Pathway to NWS Operations	AMS Annual meeting - 2016	New Orleans, LA	USA
06-2016	Joseph Olson	Presentation	Improving the turbulent mixing and non-local transport in the MYNN PBL scheme for improved consistency across spatial scales	AMS Boundary Layer and Turbulence Symposium	Salt Lake City, UT	USA
01-2017	Leon Benjamin	Presentation	Lessons Learned on Transitioning MADIS (Meteorological Assimilation Data Ingest System) to Operations and Continuing to Provide a Pathway for Research to Operations through MADIS	AMS Annual meeting - 2018	Austin, TX	USA
01-2017	Shan Sun	Presentation	15-Day Hindcast Experiments with the Uncoupled CICE Ice Model	AMS2017	Seattle, WA	USA
02-2017	Melinda Marquis	Presentation	"The importance of using atmospheric science in the planning, siting, operations, and maintenance of wind and solar power"	World Renewable Energy Congress	Perth	Australia
03-2017	Evan Kalina	Presentation	Retrieving Ice Microphysical Information from Radar Measurements for Comparison with Tropical Cyclone Numerical Models	Rosenstiel School of Marine and Atmospheric Science, University of Miami, Tropical Cyclone Operations and Research Forum/71st Interdepartmental Hurricane Conference	Miami, FL	USA
04-2017	Beth Russell, Hilary Peddicord	Presentation	Science On a Sphere Users Collaborative Network Workshop introduced new developments in SOS v5.2.	Detroit Zoological Society	Detroit, MI	USA
04-2017	Rainer Bleck	Presentation	Stratospheric Warming from a Potential Vorticity Perspective	European Geosciences Union	Vienna	Austria
06-2017	Joseph Olson	Presentation	Scale-Dependent Systematic Errors in High-Resolution RAP/HRRR Physics Over Complex Terrain	Environment Canada, Working Group on Numerical Experimentation (WGNE)	Montreal	Canada
09-2017	Daniel Nietfeld	Presentation	Hazard Services	National Weather Association Annual Meeting	Garden Grove, CA	USA
09-2017	Karina Apodaca	Presentation	Implementation of the GOES-16 GLM lightning assimilation into the GSI system for improved global and convective-scale assimilation and prediction	7th WMO Symposium on Data Assimilation	Florianópolis	Brazil

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09-2017	Kate Zhang	Presentation	Using ATom-1 Observations to Evaluate the Global Online Modeling System FIM-Chem	Meteorology And Climate – Modeling for Air Quality (MAC-MAQ)	Davis, CA	USA
09-2017	Therese Ladwig	Presentation	Development of the High Resolution Rapid Refresh Ensemble (HRRRE): A Storm-Scale Ensemble System Including Radar and Cloud Assimilation	7th WMO Symposium of Data Assimilation	Florianopolis, SC	Brazil
09-2017	Hilary Peddicord	Presentation	Using new SOS datasets for Hurricane Education	SOS Education Forum	Boulder, CO (virtually globally)	Global
09-2017	Eric Hackathorn	Presentation	SOS Explorer demonstration and outreach	American Indian Science and Engineering Society Conference http://www.aises.org/	Denver, CO	USA
09-2017	Eric James	Presentation	Observation system experiments (OSEs) with Rapid Refresh	OneNOAA Seminar, sponsored by NESDIS	Boulder, CO	USA
11-2017	Ken Fenton	Presentation	Dynamic Line Rating Using the High Resolution Rapid Refresh (HRRR) Model	Dynamic Line Rating Workshop	Idaho Falls, ID	USA
11-2017	Eric James	Presentation	High-resolution smoke forecast using an interactive meteorology-smoke modeling system: High-Resolution Rapid Refresh Smoke (HRRR-smoke)	Wildfire Smoke and Air Quality Forecasting Workshop	Lacey, WA	USA
11-2017	Paul Schultz	Presentation	National Blend of Models (NBM) Expressions of Forecast Uncertainty	NWS/ MDL National Blend of Models (NBM) Science Advisory Group	Boulder, CO	USA
12-2017	Shan Sun	Presentation	Subseasonal Skill Sensitivity in the Global FIM-iHYCOM Coupled Model	AGU2017	San Francisco, CA	USA
01-2018	Mark Govett	Presentation	Update on the Parallelization of the FV3 Dynamical Core for GPUs	American Meteorological Society's 98th Annual Meeting	Austin, TX	USA
01-2018	Shan Sun	Presentation	Aerosol Impact on Seasonal Prediction Using FIM-Chem-iHYCOM Coupled Model	AMS2018	Austin, TX	USA
01-2018	Beth Russell	Presentation	Thinking Globally: Enhancing Learning with NOAA Earth System Data Visualization Tools: SOS, SOSx, NOAA View	American Meteorological Society's 98th Annual Meeting	Austin, TX	USA
01-2018	Leon Benjamin	Presentation	The Integration of Clarus into the NWS's MADIS	AMS Annual meeting - 2018	Austin, TX	USA
01-2018	Shan Sun	Presentation	Evaluation of Subseasonal Prediction Skill Using the Global FIM-HYCOM Coupled Model	AMS 2018	Austin, TX	USA
01-2018	Guoqing Ge	Presentation	Assimilating Radar Radial Winds into the High-Resolution Rapid Refresh (HRRR) Model and Its Impact on Storm Forecasts	American Meteorological Society's 98th Annual Meeting	Austin, TX	USA
01-2018	Jason English	Presentation	Studying Vortex-SE Weather Events By Comparing a Scale-Aware PBL Scheme in the HRRR Model at Varying Resolutions to Observations	American Meteorological Society's 98th Annual Meeting	Austin, TX	USA
01-2018	Evan Kalina	Presentation	Alternate Hurricane Weather Research and Forecast system (HWRF) configurations	Joint Environmental Modeling Center (EMC)/Developmental Testbed Center (DTC) HWRF Tutorial	College Park, MD	USA
04-2018	Evan Kalina	Presentation	Using Conventional Observations and Coyote UAS Data to Evaluate the Grell-Freitas Cumulus Scheme in the Hurricane Weather Research and Forecast System	American Meteorological Society (AMS) 33rd Conference on Hurricanes and Tropical Meteorology	Ponte Vedra, FL	USA
04-2018	Hilary Peddicord	Presentation	How we can see like a satellite	National Space Symposium	Colorado Springs, CO	USA
05-2018	Hilary Peddicord & Jonathan Joice	Presentation	SOS Explorer - Experience Science in Virtual Reality	CIRES Rendezvous	Boulder, CO	USA
05-2018	David Dowell	Presentation	Development and Testing of a High-Resolution Rapid Refresh Ensemble (HRRRE)	8th EnKF Workshop	Montreal	Canada
05-2018	Beth Russell	Presentation	How to Use the SOS Visual Playlist Editor	Science On a Sphere Education Forum	Boulder, CO	USA
06-2018	Dave Turner	Presentation	Evaluating the Representation of the Land-Atmosphere Feedback during the 2017 Solar Eclipse in the High-Resolution Rapid Refresh Model	AMS Boundary Layer and Turbulence Symposium	Oklahoma City, OK	USA
06-2018	Joseph Olson	Presentation	Improving Forecasts of Low-Level Winds Induced by Thermal Troughs in the Columbia River Basin	American Meteorological Society	Denver, CO	USA
06-2018	Joseph Olson	Presentation	Improving Forecasts of Low-Level Winds Induced by Thermal Troughs in the Columbia River Basin	American Meteorological Society	Oklahoma City, OK	USA
06-2018	Jason English	Presentation	Simulating Vortex-SE Weather Events with a Scale-Adaptive PBL Scheme in the HRRR Model at Varying Resolutions	AMS WAF/NWP	Denver, CO	USA

GSL Invited Talks, Presentations, Panelist Assignments, Tutorials, and Posters 2016-2020

This list of over 450 items presented by GSL team members is not comprehensive, but demonstrates the extensive reach of GSL staff for sharing their research, expertise and experiences.

Dates	Presenter	Type	Title	Sponsor	City	Country
06-2018	Guoqing Ge	Presentation	Further Improvements of Radial Wind Assimilation in the High-Resolution Rapid Refresh (HRRR) model	25th Conference on Numerical Weather Prediction	Denver, CO	USA
06-2018	Ming Hu	Presentation	Building Functional Similar Testing System for Community Researchers to Contribute Operational Storm-Scale Data Assimilation	25th Conference on Numerical Weather Prediction, AMS	Denver, CO	USA
06-2018	Evan Kalina	Presentation	Evaluation of the boundary layer temperature and moisture fields in the Hurricane Weather Research and Forecast (HWRF) system	National Center for Atmospheric Research (NCAR) Joint Weather Research and Forecasting Model (WRF)/Model for Prediction Across Scales (MPAS) Users' Workshop	Boulder, CO	USA
07-2018	Mark Govett	Presentation	Opportunities for Collaboration on FV3	MeteoSwiss	Zurich	Switzerland
07-2018	Christina Kumler	Presentation	Machine Learning: Defining Worldwide Cyclones Labels for Training	IEEE Fusion 2018	Cambridge	UK
08-2018	Benjamin W. Green	Presentation	Evaluation of Subseasonal Errors and Skill in the FIM-iHYCOM Mode	European Geosciences Union (EGU) General Assembly 2018	Vienna	Austria
09-2018	Evan Kalina	Presentation	Informing the Development Process	Developmental Testbed Center (DTC) Science Advisory Board Meeting	Boulder, CO	USA
09-2018	Jason English	Presentation	Precipitation forecasts over the San Francisco Bay Area from the High-Resolution Rapid Refresh model during an atmospheric river event on 21-23 Mar 2018	10th Biennial Bay-Delta Science Conference	Sacramento, CA	USA
09-2018	Jebb Stewart	Presentation	Improving Satellite Data Utilization Through Deep Learning	ECMWF HPC Workshop 2018	Reading	UK
09-2018	Mark Govett	Presentation	The NOAA Exascale Computing Project	ECMWF 18th Workshop on HPC in Meteorology European Center for Medium Range Forecasting (ECMWF)	Reading	UK
09-2018	Rainer Bleck	Presentation	Gravity Wave Noise in Adaptive Vertical Grids	Max Planck Institute for Meteorology	Hamburg	Germany
09-2018	Dom Heinzeller	Presentation	Community infrastructure for facilitating and accelerating improvement and testing of physical parameterizations	NCAR / GEWEX Convection-Permitting Climate Modeling Workshop II	Boulder, CO	USA
09-2018	Amanda Back	Presentation	Selected RAP and HRRR Highlights: Latest Experiments and Enhancements	Aviation Weather Testbed Summer Experiment	Kansas City, MO	USA
09-2018	Christopher Harrop	Presentation	Improving Scientific Software Quality	Multi-Core 8 Workshop, NCAR	Boulder, CO	USA
09-2018	Christopher Harrop	Presentation	Modernizing Scientific Software Development	18th Workshop on High Performance Computing in Meteorology at the European Centre for Medium-range Weather Forecasts	Reading	UK
01-2019	Christina Kumler	Presentation	Deep Learning Methods for Extratropical and Tropical Cyclone Regions of Interest (ROI) from Satellite Observations	AMS 2019	Phoenix, AZ	USA
01-2019	Dana Uden	Presentation	Relationships between Convection and Commercial Aircraft Turbulence Reports	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Darrel Kingfield	Presentation	Hazard Services: Progress Report for 2018	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Ken Fenton	Presentation	A Filter for Using Mesonet Visibility Observations in Operations and Verification	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Ken Fenton	Presentation	The Use of the High-Resolution Rapid Refresh (HRRR) Model in Dynamic Line Rating	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Kevin Manross	Presentation	FACETs: The 2018 Hazard Services–Probabilistic Hazard Information (HS-PHI) Experiments at the NOAA Hazardous Weather Testbed	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Laura Melling	Presentation	The Use of Visible and IR-Based Probabilistic Overshooting Cloud Top Detection in the Verification of Global Forecasts of Convective Hazards	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Matt Wandishin	Presentation	Turbulence Likelihoods and Probabilistic Forecasts	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Ligia Bernardet	Presentation	Facilitating Development of Physical Parameterizations for NOAA's Unified Forecast System	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Ligia Bernardet	Presentation	The 2018 DTC Community Workshop on Unified Forecast System Test Plan and Metrics for Model Validation and Verification: Meeting Results and Research to Operations Planning	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Leon Benjamin	Presentation	Operational MADIS (Meteorological Assimilation Data Ingest System) Current Functionality and Planned Improvements	AMS Annual meeting - 2019	Phoenix, AZ	USA
01-2019	Shan Sun	Presentation	Realtime Subseasonal Forecast with SubX	AMS2019	Phoenix, AZ	USA

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Dates	Presenter	Type	Title	Sponsor	City	Country
01-2019	Dom Heinzeller	Presentation	Community Infrastructure for Facilitating Improvement and Testing of Physical Parameterizations: The Common Community Physics Package (CCPP)	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Evan Kalina	Presentation	Evaluation of the MYNN Planetary Boundary Layer Scheme in the Hurricane Weather Research and Forecast System (HWRF)	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Leon Benjamin	Presentation	Current Status of Clarus Functionality in the NWS' Meteorological Assimilation Data Ingest System (MADIS).	AMS Annual meeting - 2019	Phoenix, AZ	USA
01-2019	Dom Heinzeller, Ligia Bernardet	Presentation	Community Infrastructure for Facilitating Improvement and Testing of Physical Parameterizations: The Common Community Physics Package (CCPP)	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Shan Sun	Presentation	Deterministic and Probabilistic Subseasonal Forecast Skill with an Icosahedral, Vertically Quasi-Lagrangian Coupled Mode	AMS2019	Phoenix, AZ	USA
01-2019	Jason English	Presentation	Advanced Quantifiable Precipitation Information (AQPI): Precipitation Forecasts over the San Francisco Bay Area from the High-Resolution Rapid Refresh Model during an Atmospheric River Event on 21-23 Mar 2018	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Molly Smith	Presentation	Development of GSD's Model Analysis Tool Suite (MATS)	AMS 99th Annual Meeting	Phoenix, AZ	USA
01-2019	Shan Sun	Presentation	Aerosol Impact on Subseasonal to Seasonal Prediction Using Coupled FIM-Chem-iHYCOM Model	AMS2019	Phoenix, AZ	USA
03-2019	Ravan Ahmadov	Presentation	RAP-Smoke/HRRR-Smoke Modeling	Incident Meteorologist Training at USFS/BLM Interagency Fire Center	Boise, ID	USA
04-2019	Christina Kumler	Presentation	A New Deep Learning Software to Extract Tropical and Extratropical Cyclone Information	NCAR Software Engineering Assembly (SEA) 2019	Boulder, CO	USA
04-2019	Christina Kumler	Presentation	Using Deep Learning to Extract Regions of Interest from Satellite Data	1st NOAA AI Conference	College Park, MD	USA
04-2019	Tatiana Smirnova	Presentation	Stochastic approach to represent sub-grid scale variability of snow cover in RUC Land Surface Model (RUC LSM)	European Geosciences Union (EGU) General Assembly 2019	Vienna	Austria
05-2019	Shilpi Gupta	Presentation	HOLOSCENES / Little Boxes Presented on Science On a Sphere®	NOAA ESRL Global Monitoring Annual Conference 2019	Boulder, CO	USA
05-2019	Dave Turner	Presentation	Combining ground-based active and passive observations to improve the accuracy of thermodynamic profiles in the boundary layer	International Symposium on Tropospheric Profiling	Toulouse	France
05-2019	Dave Turner	Presentation	Testing the water vapor variance similarity relationship in the interfacial layer using Raman lidar and radar wind profiler observations with LES	International Symposium on Tropospheric Profiling	Toulouse	France
06-2019	Joseph Olson	Presentation	Improving cloud and solar radiation forecasts in the RAP/HRRR forecast systems	NCAR WRF Workshop	Boulder, CO	USA
06-2019	Dom Heinzeller	Presentation	The Common Community Physics Package CCPP: Unifying physics across NOAA and NCAR models using a common software framework	Joint WRF and MPAS Users Workshop 2019	Boulder, CO	USA
06-2019	Dave Turner	Presentation	Update on the 2017 Land-Atmosphere Feedback Experiment (LAFE)	DOE Office of Science / Atmospheric Radiation Measurement (ARM) science team meeting	Rockville, VA	USA
06-2019	Evan Kalina	Presentation	Evaluation of the MYNN Planetary Boundary Layer Scheme in the Hurricane Weather Research and Forecast system (HWRF)	National Center for Atmospheric Research (NCAR)	Boulder, CO	USA
06-2019	Michael Toy	Presentation	Evaluating and tuning the orographic gravity wave drag scheme in the RAP model.	2019 Joint WRF/MPAS Users' Workshop sponsored by NCAR	Boulder, CO	USA
06-2019	Ken Fenton	Presentation	The Use of the High-Resolution Rapid Refresh (HRRR) Model in Dynamic Line Rating	6th International Conference Energy and Meteorology (ICEM)	Copenhagen	Denmark
07-2019	Hannah Barnes	Presentation	Current Developmental Activity on the Grell-Freitas Cumulus Parameterization Including the Addition of Number Concentrations and Storm Motion	Convection Parameterization: Progress and Challenges workshop. It was hosted by ParaCon research programme	Exeter	UK
08-2019	Zoltan Toth	Presentation	Ensembles: Dynamically or statistically generated?	8th NCEP Ensemble User Workshop, NCEP	College Park, MD	USA
08-2019	Stan Benjamin	Presentation	More Accurate Solar and Wind Guidance from the NOAA High Resolution Rapid Refresh (HRRR) Model in 2019-2020	Energy Systems Integration Group	Remote	USA
08-2019	Dave Turner	Presentation	How well did the HRRR simulate the 2017 solar eclipse over the SGP?	Land Atmosphere Feedback Experiment (LAFE) workshop	Boulder, CO	USA

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Dates	Presenter	Type	Title	Sponsor	City	Country
09-2019	Darrel Kingfield	Presentation	Analyzing supercells and their attendant hazards using raw and bias-corrected S-Band differential reflectivity	39th American Meteorological Society Radar Conference	Nara	Japan
09-2019	Hannah Barnes	Presentation	Current Developmental Activity on the Grell-Freitas Cumulus Parameterization Including the Addition of Number Concentrations and Storm Motion	California Air Resources Board at the UC-Davis Conference Center	Davis, CA	USA
10-2019	Daniel Nietfeld	Presentation	"Developing Tools for Forecasting and Communication:The Human Role in their Design" (#1 in the series)	American Meteorological Society - https://www.ametsoc.org/index.cfm/ams/webinar-directory/		USA
11-2019	Evan Kalina	Presentation	Improving the Hurricane Analysis and Forecast System (HAFS) Workflow Usability, Portability, and Testing Capabilities	Hurricane Forecast Improvement Program (HFIP) 2019 Annual Meeting	Miami, FL	USA
12-2019	Shan Sun	Presentation	Contributions from CryoSat-2 sea ice thickness initialization to subseasonal prediction using coupled FV3-MOM6-CICE5 model	AGU 2019	San Francisco, CA	USA
12-2019	Shan Sun	Presentation	Contributions from CryoSat-2 sea ice thickness initialization to subseasonal prediction using coupled FV3-MOM6-CICE5 model	AGU2019	San Francisco, CA	USA
12-2019	Evan Kalina	Presentation	Using Model Ensembles and Stochastic Parameter Perturbations to Forecast Severe and Hazardous Weather	AGU 2019	San Francisco, CA	USA
12-2019	Jebb Stewart	Presentation	Understanding What the Machine Sees When Using Deep Learning for Image Segmentation to Detect Convection Initiation	AGU 2019	San Francisco, CA	USA
01-2020	Christina Kumler	Presentation	Using Deep Learning to Extract Regions of Interest (ROI) in Real-Time from Geostationary Satellite Data	AMS 2020	Boston, MA	USA
01-2020	Christina Kumler	Presentation	Representing Fire Radiative Power (FRP) from Machine Learning	AMS 2020	Boston, MA	USA
01-2020	Jeff Duda, Curtis Alexander	Presentation	Object-Based Verification in the HRRR (v3); An 'On' Talk	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Leon Benjamin	Presentation	Quasi-Operational Functionality in MADIS	AMS Annual meeting - 2020	Boston, MA	USA
01-2020	Leon Benjamin	Presentation	Current Status of Clarus Functionality in the NWS's Meteorological Assimilation Data Ingest System (MADIS)	AMS Annual meeting - 2020	Boston, MA	USA
01-2020	Shan Sun	Presentation	Realtime Subseasonal Forecast with SubX	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Dave Turner	Presentation	Improving the Water Vapor Variance Similarity Relationship in the Interfacial Layer Using Raman Lidar and Radar Wind Profiler Observations with LES	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	John Brown	Presentation	8C.3: How Do Forecasts from WRF-ARW and Stand-Alone Regional FV3 Compare?	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Molly Smith	Presentation	Initial development of the METexpress visualization tool	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Shan Sun	Presentation	Direct Effect of Aerosol on Subseasonal to Seasonal Prediction using FIM-Chem-iHYCOM Coupled Model	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
01-2020	Tatiana Smirnova, Stanley G. Benjamin, Eric P. James, Brian Jamison, Ming Hu	Presentation	Coupled Land-Atmosphere Data Assimilation (DA) in the NOAA Operational Weather Prediction Models – Rapid Refresh (RAP) and High-Resolution Rapid Refresh (HRRR)	American Meteorological Society, 100th Annual Meeting	Boston, MA	USA
04-2020	Hilary Peddicord	Presentation	Virtual Techniques on using SOSx with teachers and the public	SOS Education Forum Webinar	Virtual	USA
05-2020	Eric James	Presentation	The New RAPv5 / HRRRv4 Modeling Systems	NWS Western Region Seminar Series	SLC, Utah (virtual)	USA
05-2020	Eric James	Presentation	The New RAPv5 / HRRRv4 Modeling Systems	NWS Alaska Region Seminar Series	Anchorage, AK (virtual)	USA
06-2020	Jason English	Presentation	AQPI: RAP/HRRR Model Forecasts of Atmospheric River (AR) Events over the San Francisco Bay Area	AMS Mountain Meteorology Conference	Virtual	USA
06-2020	Eric James	Presentation	The New RAPv5 / HRRRv4 Modeling Systems	NWS Weather Prediction Center Seminar Series	College Park, MD (virtual)	USA
07-2020	Benjamin W. Green	Presentation	Subseasonal Performance in UFS Simulations Using Two Different Physics Suites	UFS Users' Workshop	Virtual	USA
07-2020	Hannah Barnes	Presentation	An Update on the Grell-Freitas Cumulus Parameterization including an Improved Treatment of Aerosol-Cloud Interactions	NOAA Developmental Testbed Center	Virtual	USA

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07-2020	Kate Zhang	Presentation	Development of Global Aerosol Forecast Model (GEFS-Aerosols) into NOAA's Unified Forecast System (UFS)	UFS Users' Workshop	Virtual	USA
07-2020	Dave Turner	Presentation	Ground-based thermodynamic profiling: Instrument options, uncertainties, and applications	World Meteorological Organization, Nowcasting and Mesoscale Research working group meeting	Virtual	USA
07-2020	Bo Huang	Presentation	Development of Hybrid Ensemble-Variational Aerosol Data Assimilation System with JEDI	1st Unified Forecast System (UFS) Users' Workshop	Boulder, CO (virtual)	USA
07-2020	Evan Kalina	Presentation	Examining the Scalability of Physics in the UFS Short-Range Weather Application (SRW)	Unified Forecast System (UFS) Users' Workshop	Virtual	USA
08-2020	Beth Russell/ Hilary Peddicord	Presentation	SOS Education Forum	NOAA Office of Education	Virtual	USA
08-2020	Evan Kalina	Presentation	Performance of Common Community Physics Package Suites Across Scales in the UFS Short-Range Weather Application (SRW)	Cooperative Institute for Research in Environmental Sciences (CIRES) Rendezvous	Virtual	USA
10-2020	Theresa Ladwig	Presentation	Skype a Scientist	Creeds Elementary School	Virginia Beach, VA (virtual)	USA
10-2020	Stan Benjamin	Presentation	Progress toward reducing cloud/radiation errors from 3km/3h forecasts to 30km/3-4week forecasts	Seoul National University	Virtual	
10-2020	Jason English	Presentation	Evaluating Experimental and Operational RAP/HRRR Model Forecasts of Atmospheric River Events in California	IARC2020 (International Atmospheric Rivers Conference)	Virtual	USA
10-2020	Hilary Peddicord Beth Russell	Presentation	Science On a Sphere Explorer (SOSx): The Go-to for NOAA Virtual Education	Three Minute Thesis Webinar: Communication and Engagement in a Virtual World - NOAA Central Region Communication	Virtual	USA
12-2020	Hilary Peddicord Beth Russell	Presentation	Active Remote Learning: SOS Explorer mobile and supplemental technologies for K-12 students	SOS Collaborative Users Network Workshop	Virtual	USA
12-2020	Hilary Peddicord, Shilpi Gupta, Keith Searight, Jebb Stewart	Presentation	Updates from NOAA Boulder SOS Team	2020 SOS Collaborative Users Network Workshop	Virtual	
12-2020	Theresa Ladwig	Presentation	Skype a Scientist	American International School Chennai	Chennai	India
12-2020	Theresa Ladwig	Presentation	Skype a Scientist	American International School Chennai	Chennai	India
12-2020	Kate Zhang	Presentation	Capability of NOAA's Global Aerosol Forecast Model (GEFS-Aerosols) in Forecasting Hazardous Air Quality	AGU	Virtual	USA
01-2021	Kate Zhang	Presentation	Development of Global Aerosol Forecast Model (GEFS-Aerosols) into NOAA's Unified Forecast System (UFS)	AMS	Virtual	USA
02-2021	Christina Kumler	Presentation	Deriving Fire Radiative Power from Numerical Weather Models and Satellites using Machine Learning Methods	2nd NOAA AI Conference	Virtual	USA
03-2021	Christina Kumler	Presentation	Taking Advantage of Machine Learning (ML) for Fire Radiative Power (FRP) Modeling	NCAR Sofware Engineering Assembly (SEA) 2021	Virtual	USA
03-2021	Theresa Ladwig	Presentation	Skype a Scientist	Cypress Christain School	Columbus, OH	USA
12-2015	Brian Etherton	Tutorial	How to use INSITE	NWS Center Weather Service Units (CSWU) in Memphis, Dallas-Ft Worth, Houston	Miami, FL	USA
12-2015	Ligia Bernardet Christina Holt	Tutorial	Hurricane WRF Tutorial	Pacific Typhoon Center Nanjing University of Information Science and Technology	Nanjing	China
01-2016	Christina Holt	Tutorial	Hurricane WRF Tutorial	NOAA Center for Weather and Climate Prediction	College Park, MD	USA
01-2018	Evan Kalina	Tutorial	Hurricane Weather Research and Forecast system (HWRF) Initialization	Joint Environmental Modeling Center (EMC)/Developmental Testbed Center (DTC) HWRF Tutorial	College Park, MD	USA
01-2018	Evan Kalina	Tutorial	Python Scripts in the Hurricane Weather Research and Forecast system (HWRF)	Joint Environmental Modeling Center (EMC)/Developmental Testbed Center (DTC) HWRF Tutorial	College Park, MD	USA
07-2018	Hilary Peddicord	Tutorial	SOS Explorer New User Training	Olympic Coast National Marine Sanctuary	Virtual	
07-2018	Hilary Peddicord	Tutorial	SOS Explorer New User Training	University of Michigan	Virtual	
07-2018	Hilary Peddicord	Tutorial	SOS Explorer New User Training	Kalamazoo, Michigan Museum	Virtual	

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08-2018	Keith Searight	Tutorial	Science On a Sphere: Operation and System Administration	Queensland Museum	Brisbane	Australia
08-2018	Keith Searight	Tutorial	Science On a Sphere: Overview and Basic System Usage	Queensland Museum	Brisbane	Australia
08-2018	Keith Searight	Tutorial	Science On a Sphere: Content Creation Training	Queensland Museum	Brisbane	Australia
09-2018	Hilary Peddicord	Tutorial	SOS Explorer New User Training	Cooperative Institute for Research in Environmental Science (CIRES)	Virtual	
09-2018	Hilary Peddicord	Tutorial	SOS Explorer New User Training	University of New Mexico, Taos	Virtual	
03-2019	Hilary Peddicord	Tutorial	Science On a Sphere new installation training	Museum of Life and Science	Durham, NC	USA
03-2019	Ligia Bernardet	Tutorial	Common Community Physics Package (CCPP)	CCPP Training	College Park, MD	USA
03-2019	Hilary Peddicord	Tutorial	The Hazard, Education Awareness and Resilience Task Force (HEART Force), Hazards Tour on SOSx	CIRES HEART	Boulder, CO	USA
07-2019	Alex Kirst	Tutorial	Science On a Sphere: Operation and Systems Administration	Museum of the Southwest	Midland, TX	USA
07-2019	Keith Searight	Tutorial	Science On a Sphere: Overview and Basic System Use	Museum of the Southwest	Midland, Texas	USA
07-2019	Alex Kirst	Tutorial	Science On a Sphere: Projector Alignment	Museum of the Southwest	Midland, TX	USA
07-2019	Keith Searight	Tutorial	Science On a Sphere: Content Creation	Museum of the Southwest	Midland, Texas	USA
07-2019	Keith Searight	Tutorial	Science On a Sphere: Presenter Training and Dataset Overview	Museum of the Southwest	Midland, Texas	USA
07-2019	Theresa Ladwig	Tutorial	Cloud and Precipitation Data Assimilation in Regional Models	NOAA/NASA/CIRA	Ft. Collins, CO	USA
09-2019	Dave Turner	Tutorial	Retrieval algorithm frameworks	Microwave Remote Sensing Summer School	Bonn	Germany
10-2019	Kate Zhang	Tutorial	FV3GFS-GSDChem Running Forecast Experiments using workflow	GSL	Virtual	USA
10-2019	Ian McGinnis	Tutorial	Science On a Sphere: Operations and System Administration	Michigan State University Museum	East Lansing, MI	USA
10-2019	Keith Searight	Tutorial	Science On a Sphere: Overview and Basic System Use	Michigan State University Museum	East Lansing, MI	USA
10-2019	Ian McGinnis	Tutorial	Science On a Sphere: Projector Alignment	Michigan State University Museum	East Lansing, MI	USA
10-2019	Keith Searight	Tutorial	Science On a Sphere: Presenter Training and Dataset Overview	Michigan State University Museum	East Lansing, MI	USA
10-2019	Keith Searight	Tutorial	Science On a Sphere: Content Creation	Michigan State University Museum	East Lansing, MI	USA
06-2020	Jebb Stewart	Tutorial	Machine Learning for Segmentation of Atmospheric Phenomenon	NCAR AI for Earth Science Summer School program	Boulder, CO (virtual)	USA
08-2020	Eric James	Tutorial	Experimental High-Resolution Rapid Refresh (HRRR) - Caribbean Weather Model Tutorial	Caribbean Meteorological Organization	CMO in Port of Spain, (Virtual)	Trinidad and Tobago
12-2020	Kate Zhang	Tutorial	Tutorial of using FV3-CCPP-Chem Workflow and Source code	GSL	Virtual	USA
01-2021	Kate Zhang	Tutorial	Dust and Volcano Options and Emissions in WRF-Chem	NCAR	NCAR	USA
02-2021	Kate Zhang	Tutorial	Dust Options and Emissions in WRF-Chem	NCAR	NCAR	USA